IN THE SPECIFICATION:

Amend the abstract as follows:

A vehicle collision avoidance system includes a 360 degree circumferentially rotating pulsed infrared laser beam scanner apparatus which rotates in a horizontal plane and a vertical plane simultaneously for generating a first signal representative of an obstacle.[[;]] [[a]] An analog processing circuit is coupled to the circumferentially rotating pulsed infrared laser beam scanner apparatus for processing the first signal and generating a plurality of signals.[[;]] [[a]] A processor is coupled to the processing circuit for processing the plurality of signals and generating a braking signal[[;]] and providing a braking apparatus ~~responsive to~~ with the braking signal. Associated methods are also provided. The system and method of the invention are based on a second order model which characterizes the relationship in both space and time between the vehicle and the obstacle. The circumferentially rotating pulsed infrared laser beam scanner apparatus includes an eye-safe laser apparatus in terms of peak power, pulse width, repetition rate and divergent angle.